

## ABSTRACT

An integrated internetworking architecture for automating the configuration and control of networks that operate according to standard layered protocols. The described architecture includes two major blocks: (1) a network; and (2) a controller coupled to the network that automatically configures the network by coordinating different resources to perform an action, such as providing an e-commerce shopping service. The controller may operate at a layer above the standard network protocols so as to abstract away the visible complexity of the network, thus allowing a human user to control, configure and operate the network as if it were a single host (e.g., computer) via a simple user interface. A tool set may also be provided to simulate and evaluate the interaction of the various networked components using the properties and provisioning information maintained within the controller.